REMARKS

Claims 49 and 58 are amended by hereby. No claims are canceled or added. Accordingly, claims 49-75 remain pending.

In the Office Action dated January 11, 2006, the Examiner rejected the claims 49-66 under 35 U.S.C. § 101 as directed to non-statutory subject matter. In connection with this rejection, the Examiner stated that claims 49-66 recite an abstract idea and that the steps merely operate on data and do not apply, involve, or use a computer. According to the Examiner, since all of the steps can be performed in the mind of the user or by use of a pencil and paper, the steps constitute an idea of how to apply the grouping rule to the numerical data. The Applicant respectfully disagrees with the rejection and, therefore, respectfully traverses the same. However, the Applicant appreciates the concern raised by the Examiner and, as a result, has amended the claims 49-57 to clarify that the present invention is a method of operating on data on a computer system. With respect to claims 58-66, the claims previously recited "a system". Accordingly, the Applicant respectfully submits that the Examiner's rejection of these claims under 35 U.S.C. § 101 was improper. However, to clarify the claims, the Applicant has amended claims 58-66 to recite a "computer system". Support for these amendments may be found, for example, on page 8 of the specification, at lines 22-23. In view of the foregoing, therefore, the Applicant respectfully submits that the claims, as now presented, address the concerns raised by the Examiner under 35 U.S.C. § 101. Accordingly, the Applicant respectfully requests that the Examiner withdraw the rejection of claims 49-66 under 35 U.S.C. § 101.

In the Office Action, the Examiner also rejected claims 49-51, 57-60, 66-69, and 75 under 35 U.S.C. § 103(a) as being unpatentable over Taniguchi et al. (U.S. Patent No. 5,764,975) in view of Zellweger et al. (U.S. Patent No. 6,185,582). Claims 52-56, 61-65, and 70-74 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Taniguchi et al. in view of Zellweger et al. and further in view of Nomura et al. (U.S. Patent No. 5,877,772). The Applicant respectfully disagrees with the rejections set forth by the Examiner and, therefore, respectfully traverses the same.

Claims 49-75 are patentably distinguishable over the references cited by the Examiner because they recite a method of operating on data on a computer system, a computer system for operating on data, and a computer-readable memory medium encoded with program data representing a computer program that can cause a computer to implement a method of

operating on data, all of which combine a number of features including, among them, where at least one grouping rule defines at least one breakpoint corresponding to the user-definable number of groups, the at least one breakpoint defining numeric ranges of the numerical data, and where application of the at least one rule to the numerical data divides the data into groups based on the at least one breakpoint to reduce the resolution of the numerical data where the grouping of the data is visualized by associating colors to the data groups. None of the references cited by the Examiner disclose or suggest such combinations of features. As a result, the Applicant respectfully submits that the references do not render any of claims 49-75 unpatentable.

Taniguchi et al. describes a data mining method and apparatus using rate of common records as a measure of similarity. As stated in the "Background of the Invention" section of the specification, Taniguchi et al. concerns a method that permits a user to select data from a large amount of data, on the order of a gigabyte of data, for example. (Taniguchi et al. at col. 1, lines 21-22 and at col. 2, lines 1-6.) Taniguchi et al. describes that it may be necessary to sort data using a combination of special values. (Taniguchi et al. at col. 2, lines 7-10.) The specific combination discussed is for the identification of individuals that tend to purchase financial goods. (Taniguchi et al. at col. 1, lines 48-50.) Parameters such as the age and the deposit balance of that individual may be relied upon. (Taniguchi et al. at col. 2, lines 1-6.)

A rule generation process 10 reads data to be analyzed from a database and performs a setting process for rule generation condition 11 and generates a plurality of rules 200. (Taniguchi et al. at col. 5, lines 5-8.) A similar evaluation process 20 evaluates the rules 200 and outputs generated rules for similarly-related information 300 on the basis of matches or mismatches in the data. (Taniguchi et al. at col. 5, lines 10-13.) An evaluation process for the user-designated rules 40 obtains the fitness of the inputted user-designated rules and outputs the results to the output device 5. (Taniguchi et al. at col. 5, lines 21-24.) As understood by the Applicant, therefore, the method of Taniguchi et al. is designed to sort through data based on the intersection of two or more user-designated rules. (See, e.g., Taniguchi et al. at Figs. 17a, 17b, and 18 and also at col. 9, lines 30-61.)

As recognized by the Examiner, Taniguchi et al. does not disclose any method or apparatus wherein the at least one grouping rule defines at least one breakpoint corresponding to the user-definable number of groups, the at least one breakpoint defining numeric ranges of the numerical data, and wherein application of the at least one rule to the numerical data divides the data into groups based on the at least one breakpoint to reduce the resolution of

the numerical data wherein the grouping of the data is visualized by associating colors to the data groups. The Examiner relied on Zellweger et al. for this teaching.

The Applicant respectfully disagrees with the Examiner that Zellweger et al. discloses or suggests what is missing from Taniguchi et al. To the contrary, Zellweger et al. describes a spreadsheet view enhancement system that provides a way to effectively display constraint graph information statically or dynamically. (Zellweger et al. at col. 1, line 61 through col. 2, line 9.) As defined by Zellweger et al., the primary body of data is the data in the spreadsheet and the supporting body of data is the constraint graph information, such as formulas, etc., that underlie the primary body of data. (Zellweger et al. at col. 7, lines 31-48.) Various strategies are employed to illustrate the connection between the primary body of data and the constraint graph information, such as:

> 1) Position, with primary body of data moved out of way; and supporting data takes its place.
> 2) Size, with the primary body of data shrinking down as supporting data concurrently grows up.
> 3) Color, with the primary body of data changing to a lighter shade as supporting data scales up (in size) and becomes darker; allow supporting data to overlap.
> 4) Distortion, with the primary body of data squashed or stretched in vertical or horizontal directions, or otherwise distorted to make room for supporting data.

(Zellweger et al. at col. 7, lines 54-63.) Regardless of the strategy employed, the focus of the methodology described by Zellweger et al. is to provide a visual connection between specific data entries in the primary body of data so that the user can understand the connection between those data points.

As the Applicant understands Zellweger et al., there is no at least one breakpoint defining numeric ranges of numerical data where the application of a rule divides the numerical data into groups and the data is visualized by associating colors to the groups, among other features. To the contrary, it is the purpose of Zellweger et al. to illustrate or display the connection between data entries. In contrast, with respect to the present invention, the purpose is to illustrate common features between the data points (e.g., numerical ranges) to facilitate an understanding of the data itself. Accordingly, the Applicant respectfully submits that Zellweger et al. cannot be combined properly with Taniguchi et al. to render obvious any of claims 49-75. As a result, the Applicant respectfully requests that the Examiner withdraw the rejections under 35 U.S.C. § 103(a) that involve the combination of these two references.

The Applicant also respectfully requests that the Examiner withdraw the rejections involving Taniguchi et al., Zellweger et al. and Nomura et al. As discussed in the last-filed response, Nomura et al. describes a graphic processing apparatus that allows the user to specify the appearance of an image by automatically expressing differences in color and hatching attributes. In particular, Nomura et al. is a graphic processor that automatically selects colors and hatching to fill regions or areas in a graphic so that the colors selected present a high-quality color picture. (Nomura et al. at col. 1, lines 18-36, and col. 2, lines 22-34.) Specifically, as illustrated in Figures 3, 4, 8, and 9, the graphic processing apparatus of Nomura et al. identifies target areas requiring color and hatching attributes and automatically selects colors to fills those regions based, at least in part, on the size of the regions. (Nomura et al. at col. 13, line 61, to col. 15, line 67.)

Nomura et al. does not describe, among other features, a method where at least one user-defined grouping rule for grouping numerical data into user-definable numbers of groups, where at least one of the grouping rules are applied to the numerical data, or where the at least one grouping rule defines at least one breakpoint. Accordingly, Nomura et al. cannot be combined properly with the remaining references to render any of claims 49-75 obvious. Accordingly, the Applicant respectfully requests that the Examiner withdraw the rejection under 35 U.S.C. § 103(a).

Each of the rejections asserted by the Examiner having been addressed, the Applicant respectfully submits that claims 49-75 are patentable over the references cited by the Examiner. Accordingly, the Applicant respectfully requests that the Examiner withdraw the rejections asserted against claims 49-75 and pass this application quickly to issue.

If the Examiner believes a telephone conference would be helpful, she is invited to contact the undersigned at the telephone number given below.

Respectfully submitted,
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